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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
Chase, et al.

Serial No.: 09/772,360

Confirmation No.: 1500

Filed: January 30, 2001

For: TECHNIQUE FOR ETHERNET ACCESS TO PACKET-BASED SERVICES

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§ Group Art Unit: 2667
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§ Examiner: Rhonda L. Murphy
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MAIL STOP APPEAL BRIEF - PATENTS
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Dear Sir:

APPEAL BRIEF

Appellants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 2667 dated July 21, 2005, finally rejecting claim 19. Please charge the fee of $500.00 for filing this brief and all other fees that may be required to make this Brief timely and acceptable to the Patent Office, to Deposit Account No. 20-0782/ATT2000-0660.

REAL PARTY IN INTEREST

The real party in interest is AT&T, Corp.

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RELATED APPEALS AND INTERFERENCES

The Appellants know of no related appeals or interferences that might directly affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claim 19 is pending in the application. Claim 19 was originally presented in the application. Claim 19 stands rejected in view of several references as discussed below. The rejection of claim 19 based on the cited references is appealed. The pending claim is shown in the attached Appendix.

STATUS OF AMENDMENTS

A preliminary amendment was filed on August 22, 2001 to amend the specification, various claims and add new claim 25. In a response filed on November 16, 2004 to the office action dated August 16, 2004, claims 1-18 and 20-25 were cancelled and claim 19 was amended into independent form, as suggested by the Examiner, for allowance of claim 19. Subsequently, a rejection was issued on February 8, 2005 and a final rejection issued on July 21, 2005. The final rejection was affirmed by an advisory action letter dated November 28, 2005, from which Appellants now appeal.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a technique for ethernet access to packet-based services. In the embodiment of independent claim 19, an ethernet protocol network (10) is described. The ethernet protocol network (10) comprises a fiber ring infrastructure (14). (See Appellants' specification, pg. 4, ll. 3-9.) The ethernet protocol network (10) further comprises a plurality of platforms (12_1-12_4) coupled to the fiber ring infrastructure (14). (See *Id.*) Each platform (12_1-12_4) serves at least one customer (16_1-16_4) for statistically multiplexing frames (20) onto the fiber ring infrastructure (14) from the at least one customer (16_1-16_4) and statistically demultiplexes frames (20) off the fiber ring

infrastructure (14) to the at least one customer (16_1-16_4). (See Appellants' specification, pg. 4, ll. 6-23.) Furthermore, each platform (12_1-12_4) sending a frame (20) containing a plurality of bits overwrites at least one of the plurality of bits of said frame (20) with a customer descriptor (22') that identifies the sending customer and routes the frame (20) on a path obtained by mapping the customer descriptor (22') to such path, wherein the receiving platform maps the customer descriptor (22') through an ATM switch router (30) to a corresponding one of plurality of Frame Relay and ATM Permanent Virtual Circuits (32_1-32_6). (See Appellants' specification, pg. 5, ll. 16-30 and pg. 7, ll. 13-27.)

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claim 19 stands rejected under 35 U.S.C. §103(a) as being obvious over Baum, et al. (United States Patent No. 6,771,673, issued on August 3, 2004, hereinafter referred to as "Baum") in view of Stoner, et al. (United States Patent No. 6,052,383, issued on August 18, 2000, hereinafter referred to as "Stoner") and Tsukamoto, et al. (United States Patent No. 6,498,794, issued on December 24, 2002, hereinafter referred to as "Tsukamoto").

ARGUMENT

A. 35 U.S.C. §103(a) – Baum in view of Stoner and in further view of Tsukamoto

1. Claim 19

The Examiner rejected claim 19 in the Final Office Action under 35 U.S.C. 103 as being unpatentable over Baum in view of Stoner and Tsukamoto. The rejection is respectfully traversed.

Baum teaches a method and apparatus and data structures for providing access to an edge router of a network. Baum teaches a method of aggregating physical connections from customers for presentation to an access router and de-aggregating traffic from a shared link(s) from the access router. (See Baum, Abstract.) Baum teaches a method of adding customer addressing information by encapsulation of the customer's original IP traffic. (See Baum, col. 15, ll. 50-53.) There are two separate frames, the MAC sublayer protocol and the modified Ethernet frame containing the

customer information. (See Baum, col. 13, l. 61 – col. 14, l. 5; col.15, ll. 63-66.) Baum teaches that the Ethernet frame is independent of the original IP packet. (See Baum, col. 16, ll. 12-15.)

Stoner teaches a LAN to ATM backbone switch module. Information or data is sent to a LAN and the LAN processes this information or data into a format to be stored in a memory means. (See Stoner, col. 4, ll. 15-22.) While the information is in the memory means it is analyzed and modified into an ATM format and transferred out of the memory means through the ATM port and ATM line. (See *Id.* at 23-29.)

Tsukamoto teaches a transmitter with cell switching function. Tsukamoto provides a transmitter capable of efficiently mapping ATM cells of multiple channels to one STS-1 signal. (See Tsukamoto, col. 2, ll. 18-20.) In doing so, Tsukamoto uses a ring network composed of optical fiber. (See Tsukamoto, col. 5, ll. 59-62.)

The Appellants respectfully submit that Baum, Stoner and Tsukamoto, alone or in any permissible combination, fail to teach, show or suggest an Ethernet protocol network in a fiber ring infrastructure wherein the receiving platform maps the customer descriptor through an ATM switch router to a corresponding one of a plurality of Frame Relay and ATM Permanent Virtual Circuits. Specifically, Appellants' independent claim 19 recites:

> 19. An Ethernet protocol network comprising:
> a fiber ring infrastructure; and
> a plurality of platforms coupled to the fiber ring infrastructure, each platform serving at least one customer for statistically multiplexing frames onto the fiber ring infrastructure from said one customer and for statistically de-multiplexing frames off the fiber ring infrastructure to the one customer
> wherein each platform sending a frame containing a plurality of bits overwrites at least one of the plurality of bits of said frame with a customer descriptor that identifies the sending customer; and routes the frame on a path obtained by mapping the customer descriptor to such path, wherein the receiving platform maps the customer descriptor through an ATM switch router to a corresponding one of a plurality of Frame Relay and ATM Permanent Virtual Circuits.

Appellants' invention teaches the novel concept of an Ethernet protocol network wherein each platform sending a frame containing a plurality of bits overwrites at least one of the plurality of bits of the frame with a customer descriptor that identifies the

sending customer. The frame is then routed on a path obtained by mapping the customer descriptor to such path, wherein the receiving platform maps the customer descriptor through an ATM switch router to a corresponding one of a plurality of Frame Relay and ATM Permanent Virtual Circuits utilizing a fiber ring infrastructure. The Appellants' invention teaches a method of routing to logically separate traffic received from different customers, resulting in better data security, by modifying the same frame of the original IP data packet. (See Appellants' specification, pg. 5, ll. 9-20.)

For a prior art reference to be combined to render obvious a subsequent invention under 35 U.S.C. § 103, there must be something in the prior art as a whole which suggests the desirability, and thus the obviousness, of making the combination. Uniroyal v. Rudkin-Wiley, 5 U.S.P.SQ.2d 1434, 1438 (Fed. Cir. 1988). The teachings of the references can be combined only if there is some suggestion or incentive in the prior art to do so. In re Fine, 5 U.S.P.SQ.2d 1596, 1599 (Fed. Cir. 1988). Hindsight is strictly forbidden. It is impermissible to use the claims as a framework to pick and choose among individual references to recreate the claimed invention Id. at 1600; W.L. Gore Associates, Inc., v. Garlock, Inc., 220 U.S.P.Q. 303, 312 (Fed. Cir. 1983).

The Appellants respectfully submit that the Examiner used hindsight to recreate the claimed invention. Namely, the Examiner was compelled to locate a separate reference for each of the three limitations of the Appellants' invention. The fact that the Examiner could not find a single reference that taught at least two of the limitations demonstrates how loosely the three references are related. More specifically, none of the references provide any suggestion or motivation to be combined with any of the other references.

For instance, the Appellants respectfully submit that there is no suggestion or incentive to combine Stoner with Baum and Tsukamoto. The Examiner alleges that the ATM switch router that is positively claimed by the Appellants reads on the ATM interface means 17 described in the Stoner reference. The Board's attention is directed to the fact that the ATM interface means 17 identified by the Examiner does not perform a switching or mapping function as described in the Appellants' specification. (See pg. 7, ll. 22-26.) Rather, Stoner describes the ATM interface as being capable of reading information from the ATM port and converting the information into an ATM

format. (See Stoner, Abstract). Consequently, the ATM interface does not serve the same function as the claimed ATM switch router. Thus, the alleged combination of Baum, Stoner, and Tsukamoto would still fail to make Appellants' invention obvious even if they are deemed to be combinable.

Similarly, the Appellants submit that the Examiner used hindsight to select the Tsukamoto reference. Specifically, the Appellants contend that the Examiner simply found a reference that merely mentioned a fiber ring network without any regard for the presence of a motivation to combine the reference with Baum and Stoner. Notably, there is only a single reference of an exemplary ring infrastructure in the entire specification. (See Tsukamoto, col. 5, ll. 59-62.) There is absolutely no discussion or suggestion as to how such a ring network can be combined with the teaching of Baum and Stoner, which clearly are not based on a ring infrastructure. Therefore, Baum and Stoner cannot be meaningfully combined with Tsukamoto.

Lastly, the Appellants respectfully submit that the Baum reference is not compatible with the combination of Stoner and Tsukamoto. Namely, Baum teaches an aggregation unit that is directly coupled to a single access router via one or more high bandwidth links. (See Baum, col. 11, ll. 60-64; FIG. 10.) The architecture taught by Baum employs a single access router for each respective aggregation unit. Similarly, there is no mention or suggestion in the reference that this aggregation unit can be used with a fiber ring infrastructure. Consequently, communication between an aggregation unit and any other communication network component must be conducted indirectly via the access router. (See Baum, FIGs. 10 and 19.) Conversely, if there was a need for the aggregation units to communicate directly with each other, the aggregation units would require two or more access servers to establish a connection. (See Baum, FIG. 19.) This configuration is simply not compatible with the ring infrastructure taught by Tsukamoto.

In light of the above, the Appellants respectfully submit that there is no suggestion or motivation to combine Baum, Stoner, and Tsukamoto. Consequently, the Appellants submit that combination of Baum, Stoner, and Tsukamoto does not teach or suggest the present invention as recited in independent claim 19. Thus, the Appellants respectfully request the rejection be withdrawn.

CONCLUSION

For the reasons advanced above, Appellants respectfully urge that the rejection of claim 19 as being obvious under 35 U.S.C. §103 is improper. Reversal of the rejection in this appeal is respectfully requested. If necessary, please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 20-0782/ATT/2000-0660, and please credit any excess fees to the above referenced deposit account.

Respectfully submitted,

3/21/06

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CLAIMS APPENDIX

19. An Ethernet protocol network comprising:

a fiber ring infrastructure; and

a plurality of platforms coupled to the fiber ring infrastructure, each platform serving at least one customer for statistically multiplexing frames onto the fiber ring infrastructure from said one customer and for statistically de-multiplexing frames off the fiber ring infrastructure to the one customer

wherein each platform sending a frame containing a plurality of bits overwrites at least one of the plurality of bits of said frame with a customer descriptor that identifies the sending customer; and routes the frame on a path obtained by mapping the customer descriptor to such path, wherein the receiving platform maps the customer descriptor through an ATM switch router to a corresponding one of a plurality of Frame Relay and ATM Permanent Virtual Circuits.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None